

Amendments to the Drawings:

The attached sheet of drawings include changes to Figure 2. This sheet replaces the original drawing of Fig. 2. A replacement sheet and an annotated sheet showing changes are in the Appendix at the end of this paper.

REMARKS/ARGUMENTS

Claims 1 – 9 are presented for reconsideration and further examination in view of the foregoing amendments and following remarks.

In the outstanding Office Action, the Examiner objected to the amendment of August 16, 2006 for introducing new matter; objected to the drawings for containing new matter; rejected claims 1 – 9 under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement; rejected claims 1 and 5 – 9 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 3,585,723 to Simor (hereinafter referred to as “the Simor ‘723 patent”); and rejected claims 2 – 4 under 35 U.S.C. §103(a) as being unpatentable over the Simor ‘723 patent in view of U.S. Patent No. 6,186,790 to Karmaker et al. (hereinafter referred to as “the Karmaker et al. ‘790 patent”).

By this Response and Amendment, claim 1 has been amended to recite “...at least one of said depending flexible continuous side surfaces *having a relief on it's inner surface corresponding to a bent portion*, located so as to define an inwardly directed bottom portion directed inwardly from said bent portion....” and, as amended, the rejections to claim 1 and the rejections to the claims dependent thereon are traversed.

Support for the amendment to claim 1 and to the specification can be found in Fig. 2 of the originally filed application. Therefore, it is respectfully submitted that the above amendments do not introduce any new matter, within the meaning of 35 U.S.C. §132, to this application.

Objection to the Specification

The Examiner objected to the specification for introducing new matter. Specifically, the Examiner objected to the phrase “bend axis.”

Response

By this Response and Amendment, the specification has been amended to replace the phrase “bend axis” with –relief– and with –corresponding bent portion–. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the objection to the specification.

Objection to the Drawings

The Examiner objected to the drawings for containing a reference numeral that corresponds to subject matter from the specification that was objected to as being new matter.

Response

By this Response and Amendment, the specification has been amended to replace the phrase “bend axis” with –relief– and with –corresponding bent portion–. Also, the Applicant has added element no. 17 to the drawings, which is in accord with the amendments to the specification. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the objection to the drawings.

Rejection Under 35 U.S.C. 112, First Paragraph

The Examiner rejected claims 1 – 9 as reciting new matter. Specifically, the phrase “bend axis,” which is recited in claim 1 was considered new matter.

Response

By this Response and Amendment, the phrase “bend axis” has been deleted from claim 1,

thereby obviating the rejection thereto and to the claims dependent thereon (claims 2 – 9).

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection to claims 1 – 9.

Rejection Under 35 U.S.C. §102(b)

The Examiner rejected claims 1 and 5 – 9 as being anticipated by the Simor '723 patent.

Response

By this Response and Amendment, independent claim 1 has been amended and, as amended, the rejections thereto are traversed since all of the features of amended independent claim 1 are not present in the cited prior art.

For a reference to anticipate an invention, all of the elements of that invention must be present in the reference. The test for anticipation under section 102 is whether each and every element as set forth in the claim is found, either expressly or inherently, in a single prior art reference. *Verdegaal Bros. v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); MPEP §2131.

Amended independent claim 1 recites: "...at least one of said depending flexible continuous side surfaces having a relief on it's inner surface corresponding to a bent portion, located so as to define an inwardly directed bottom portion directed inwardly from said bent portion; said relief in at least one of the flexible side surfaces enabling the dental crown to be used for treatment of primary teeth and permanent molars." The undercut in the crown of the presently claimed invention is aimed at providing mechanical retention of the crown on teeth using buccal and lingual bulges that exist

normally on primary and some permanent teeth. The crown is made of very flexible materials and no changes of the original contour will be observed after placement of the crown. The crown configuration eliminates a need to adjust its margins to the tooth margins, with no possibility to change occlusal morphology using hand instruments.

The Simor '723 patent discloses a dental crown including an occlusal surface and a sidewall that tapers in cross section toward a restricted opening at the cervix. From the figures of the Simor '723 patent, it appears that the wall begins tapering at the top portion of the tooth. The Simor '723 patent does not disclose any relief on the inner surface of the flexible side surfaces corresponding to a bent portion located so as to define an inwardly directed bottom portion of the crown. It is clear from the description in the Simor '723 patent that this technique is directed toward designing a different type of crown and accordingly uses a different means. Indeed, the technique of the Simor '723 patent deals with a temporary crown for a permanent dentition. The crown is made of a metal material, *see The Simor '723 Patent* at col. 4, line 69 – 74. Although the possibility of using plastics is mentioned in the Simor '723 patent, various features of the crown disclosed in the patent and being essential for the technique disclosed and claimed in this patent prove the use of metal and not plastics. In this connection, Applicant notes col. 6, lines 11 – 14 of the Simor '723 patent, which describes the procedure of changing occlusal configuration of the crown using hand instruments by pressure, which cannot be performed on plastics; and Applicant further notes col. 3, lines 37 – 39, which describes the procedure of burnishing of the cervical edge of the crown, which can be performed only with malleable metals.

In contrast to the presently claimed invention, the crown disclosed in the Simor '723 patent does not disclose, teach or suggest a crown comprising “[a] crown... comprising..., at least one of

said depending flexible continuous side surfaces having a *relief on it's inner surface* corresponding to a bent portion, located so as to define an inwardly directed bottom portion directed inwardly from said bent portion; said relief in at least one of the flexible side surfaces enabling the dental crown to be used for treatment of primary teeth and permanent molars" as recited in claim 1. The Simor '723 patent discloses a flexible side surface; however, the Simor '723 patent is silent with respect to where the side surface bends. At the very most, the figures show that the side surface bends at its connection to the occlusal surface.

Notwithstanding this and in further contrast to the presently claimed invention, the Simor '723 patent does not disclose, teach or suggest "a relief on it inner surface *corresponding* to a bent portion" as recited in amended independent claim 1. The bend provided in the crown of the presently claimed invention reduces the stress on the connection between the depending side surface and the tooth shaped top surface, thereby preventing potential fracture. The Simor '723 patent does not disclose, teach or suggest such a benefit. Thus, the Simor '723 patent does not anticipate the presently claimed invention.

Similarly, as dependent claims necessarily contain all of the features of the independent claim from which they depend, claims 5 – 9 are asserted to be patentable over the cited prior art for at least the reason that they depend from claim 1. Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection under 35 U.S.C. §102(b).

Rejection Under 35 U.S.C. §103(a)

The Examiner rejected claims 2 – 4 under 35 U.S.C. §103(a) as being unpatentable over the Simor '723 patent in view of the Karmaker et al. '790 patent.

Response

By this Response and Amendment, independent claim 1 has been amended and, as amended, Applicant respectfully traverses the Examiner's rejection since all of the features of amended independent claim 1, from which claims 2 – 4 depend, are neither disclosed, taught, nor suggested by the cited prior art.

To establish a *prima facie* case of obviousness, the Examiner must establish that the prior art references teach or suggest all of the claim limitations. *Amgen, Inc. v. Chugai Pharm. Co.*, 18 USPQ2d 1016, 1023 (Fed. Cir. 1991); *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988); *In re Wilson*, 165 USPQ 494, 496 (CCPA 1970).

The arguments above regarding the Simor '723 patent are incorporated by reference. The Karmaker et al. '790 patent does not cure the deficiencies of the Simor '723 patent. The Karmaker et al. '790 patent discloses structural components for dental appliances that are comprised of a polymeric matrix and further discloses that uses for the structural components include crowns. In contrast to the presently claimed invention, however, the cited prior art combination does not disclose, teach or suggest "[a] crown... comprising..., ..., at least one of said depending flexible continuous side surfaces having a relief on it's inner surface corresponding to a bent portion, located so as to define an inwardly directed bottom portion directed inwardly from said bent portion; said relief in at least one of the flexible side surfaces enabling the dental crown to be used for treatment of primary teeth and permanent molars" as recited in claim 1. As this feature is not disclosed, taught or suggested by the cited prior art combination, the cited prior art combination does not render claim 1, or the claims dependent thereon, obvious.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the outstanding rejections.

CONCLUSION

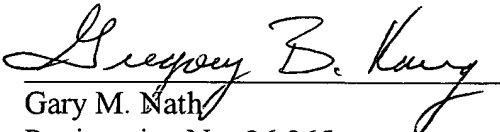
In light of the foregoing, Applicant submits that the application is now in condition for allowance. If the Examiner believes the application is not in condition for allowance, Applicant respectfully requests that the Examiner contact the undersigned attorney if it is believed that such contact will expedite the prosecution of the application.

In the event this paper is not timely filed, Applicant petitions for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 14-0112.

Respectfully submitted,

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Reply to final Office Action of November 7, 2006

Attorney Docket No. 25771X

APPENDIX



FIG. 1

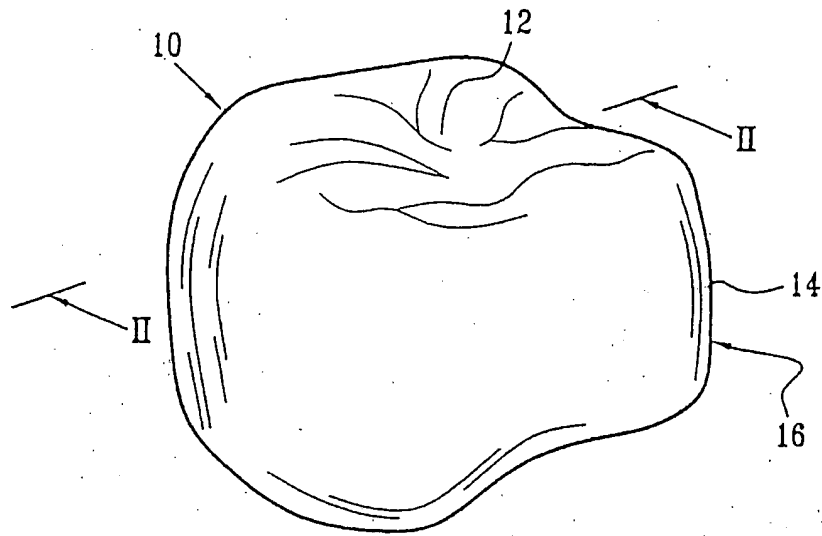


FIG. 2

